

Appendix A: Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Channel	PCL	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GSM850	128	5	33.84	27.19	38.45	PASS
GSM850	190	5	34.01	27.36	38.45	PASS
GSM850	251	5	33.86	27.21	38.45	PASS
GSM1900	512	0	30.23	25.63	33.00	PASS
GSM1900	661	0	30.59	25.99	33.00	PASS
GSM1900	810	0	30.33	25.73	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	33.84	27.19	38.45	PASS
GPRS850	128	5	2	32.82	26.17	38.45	PASS
GPRS850	128	5	3	30.74	24.09	38.45	PASS
GPRS850	128	5	4	29.63	22.98	38.45	PASS
GPRS850	190	5	1	34.00	27.35	38.45	PASS
GPRS850	190	5	2	32.99	26.34	38.45	PASS
GPRS850	190	5	3	30.92	24.27	38.45	PASS
GPRS850	190	5	4	29.82	23.17	38.45	PASS
GPRS850	251	5	1	33.86	27.21	38.45	PASS
GPRS850	251	5	2	32.87	26.22	38.45	PASS
GPRS850	251	5	3	30.84	24.19	38.45	PASS
GPRS850	251	5	4	29.73	23.08	38.45	PASS
GPRS1900	512	0	1	30.23	25.63	33.00	PASS
GPRS1900	512	0	2	29.44	24.84	33.00	PASS
GPRS1900	512	0	3	27.48	22.88	33.00	PASS
GPRS1900	512	0	4	26.32	21.72	33.00	PASS
GPRS1900	661	0	1	30.56	25.96	33.00	PASS
GPRS1900	661	0	2	29.81	25.21	33.00	PASS
GPRS1900	661	0	3	27.96	23.36	33.00	PASS
GPRS1900	661	0	4	26.80	22.20	33.00	PASS
GPRS1900	810	0	1	30.32	25.72	33.00	PASS
GPRS1900	810	0	2	29.60	25.00	33.00	PASS
GPRS1900	810	0	3	27.88	23.28	33.00	PASS
GPRS1900	810	0	4	26.75	22.15	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	27.80	21.15	38.45	PASS
EGPRS850	128	8	2	26.67	20.02	38.45	PASS
EGPRS850	128	8	3	24.50	17.85	38.45	PASS
EGPRS850	128	8	4	24.47	17.82	38.45	PASS
EGPRS850	190	8	1	27.73	21.08	38.45	PASS
EGPRS850	190	8	2	26.66	20.01	38.45	PASS
EGPRS850	190	8	3	24.45	17.8	38.45	PASS
EGPRS850	190	8	4	24.51	17.86	38.45	PASS
EGPRS850	251	8	1	27.89	21.24	38.45	PASS
EGPRS850	251	8	2	26.80	20.15	38.45	PASS
EGPRS850	251	8	3	24.59	17.94	38.45	PASS
EGPRS850	251	8	4	24.68	18.03	38.45	PASS
EGPRS1900	512	2	1	26.30	21.70	33.00	PASS
EGPRS1900	512	2	2	25.21	20.61	33.00	PASS
EGPRS1900	512	2	3	23.13	18.53	33.00	PASS
EGPRS1900	512	2	4	23.58	18.98	33.00	PASS
EGPRS1900	661	2	1	26.56	21.96	33.00	PASS
EGPRS1900	661	2	2	25.57	20.97	33.00	PASS
EGPRS1900	661	2	3	23.47	18.87	33.00	PASS
EGPRS1900	661	2	4	23.94	19.34	33.00	PASS
EGPRS1900	810	2	1	26.59	21.99	33.00	PASS
EGPRS1900	810	2	2	25.59	20.99	33.00	PASS
EGPRS1900	810	2	3	23.49	18.89	33.00	PASS
EGPRS1900	810	2	4	23.93	19.33	33.00	PASS

Remark: EIRP (dBm) = Conducted power (dBm) + Antenna Gain (dBi). (For GSM1900)

ERP (dBm) = EIRP (dBm) - 2.15 (dB). (For GSM850)

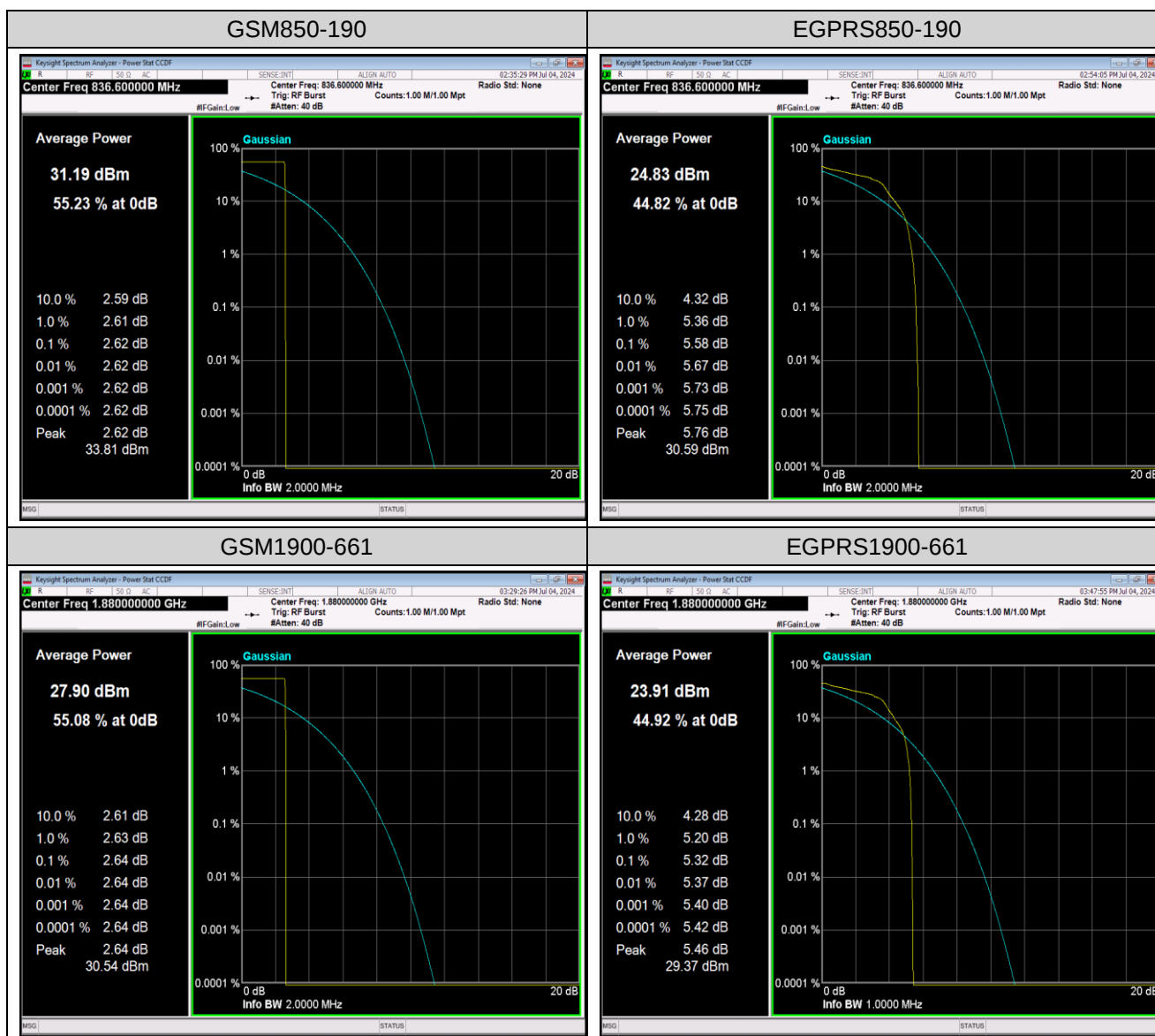
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.62	13	PASS
EGPRS850	190	8	5.58	13	PASS
GSM1900	661	0	2.64	13	PASS
EGPRS1900	661	2	5.32	13	PASS

Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

Test Graphs

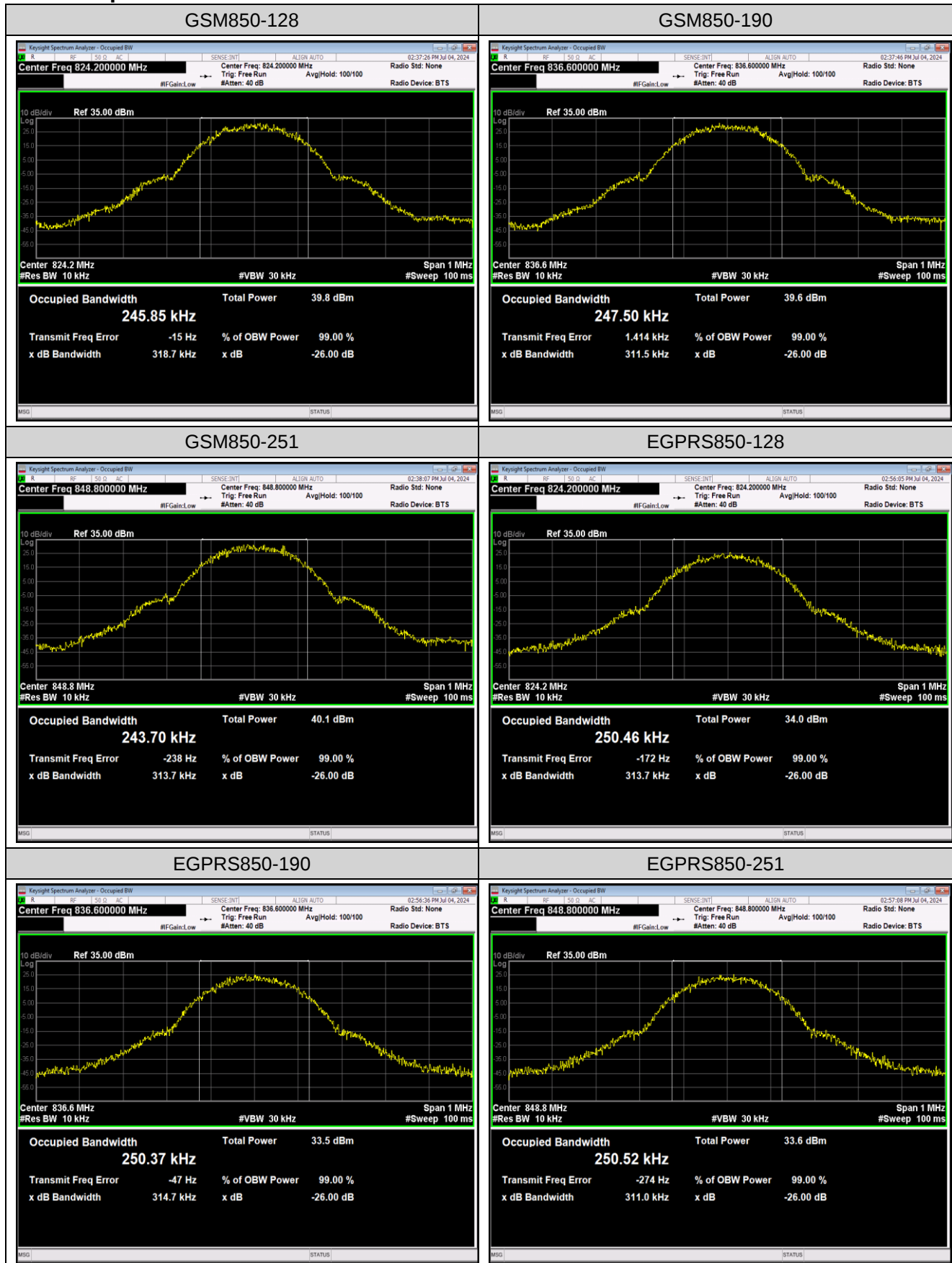


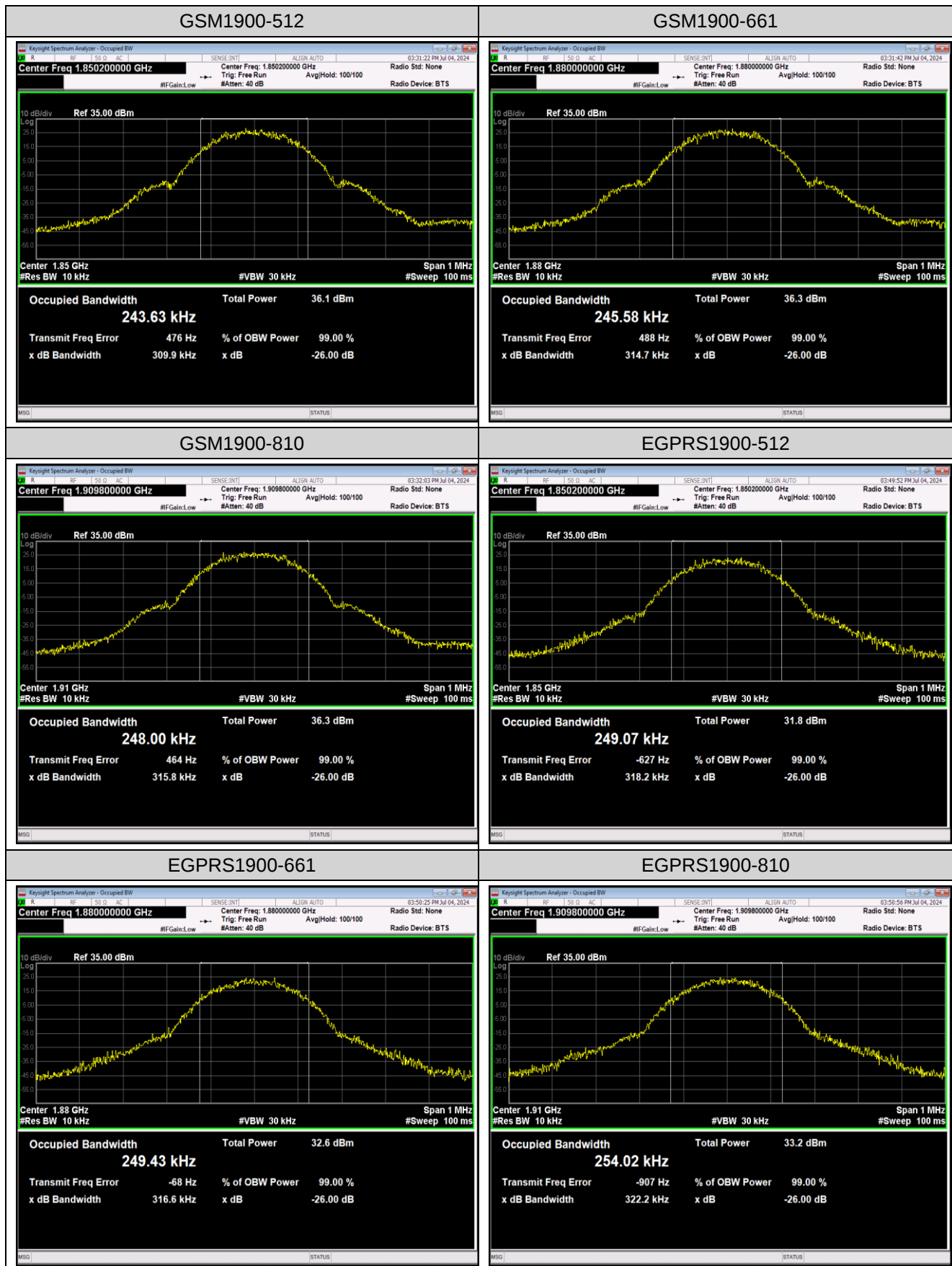
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24585	0.3187	---	PASS
GSM850	190	5	0.24750	0.3115	---	PASS
GSM850	251	5	0.24370	0.3137	---	PASS
EGPRS850	128	8	0.25046	0.3137	---	PASS
EGPRS850	190	8	0.25037	0.3147	---	PASS
EGPRS850	251	8	0.25052	0.3110	---	PASS
GSM1900	512	0	0.24363	0.3099	---	PASS
GSM1900	661	0	0.24558	0.3147	---	PASS
GSM1900	810	0	0.24800	0.3158	---	PASS
EGPRS1900	512	2	0.24907	0.3182	---	PASS
EGPRS1900	661	2	0.24943	0.3166	---	PASS
EGPRS1900	810	2	0.25402	0.3222	---	PASS

Test Graphs



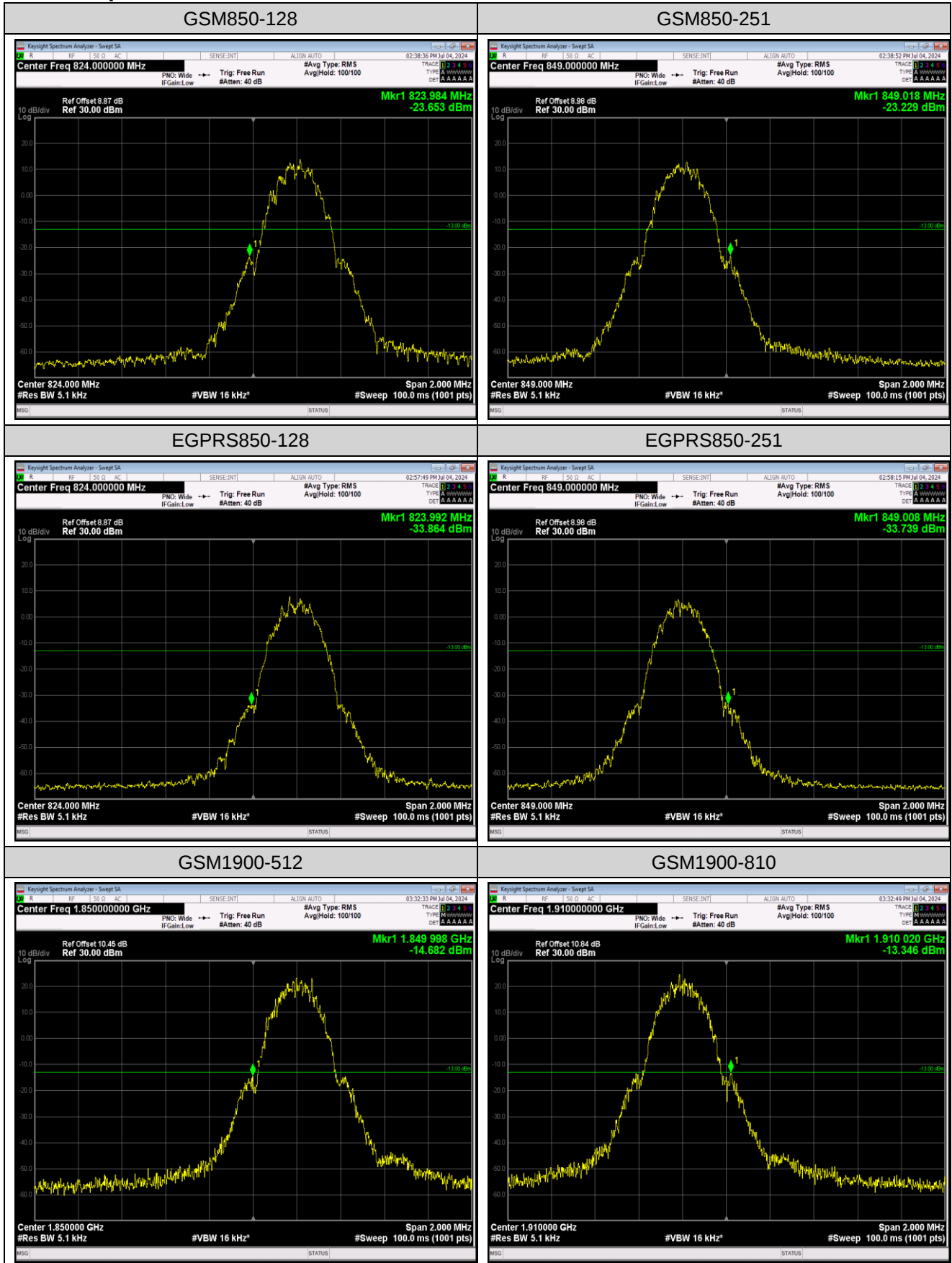


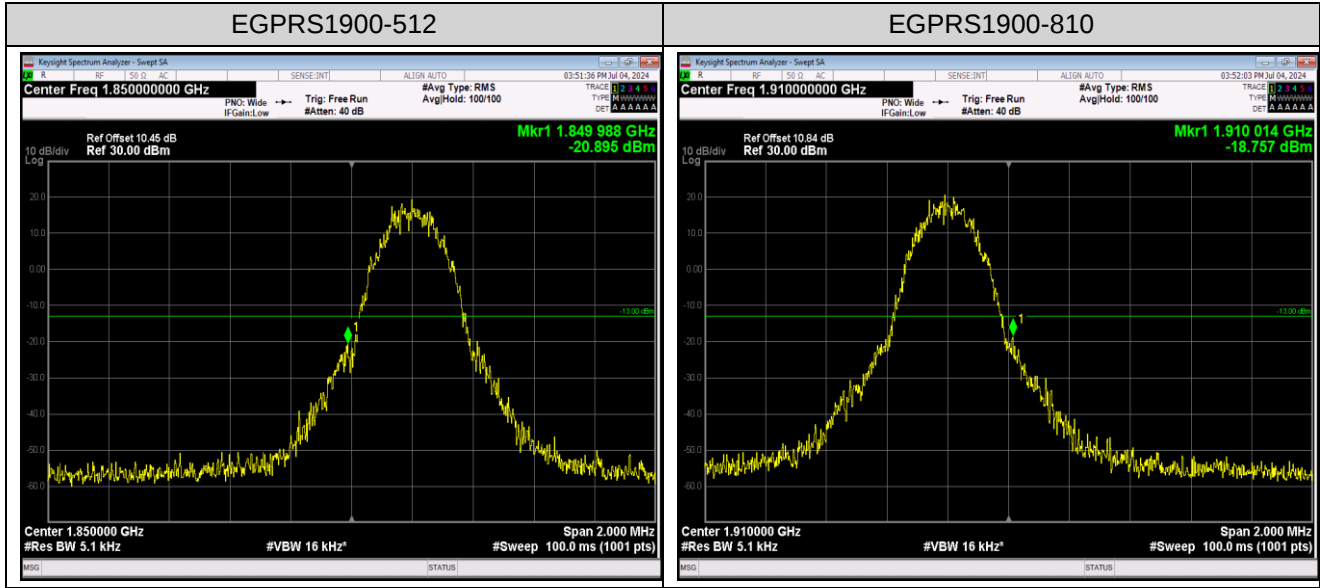
Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	823.98	-23.65	-13	PASS
GSM850	251	5	849.02	-23.23	-13	PASS
EGPRS850	128	8	823.99	-33.86	-13	PASS
EGPRS850	251	8	849.01	-33.74	-13	PASS
GSM1900	512	0	1850.00	-14.68	-13	PASS
GSM1900	810	0	1910.02	-13.35	-13	PASS
EGPRS1900	512	2	1849.99	-20.89	-13	PASS
EGPRS1900	810	2	1910.01	-18.76	-13	PASS

Test Graphs





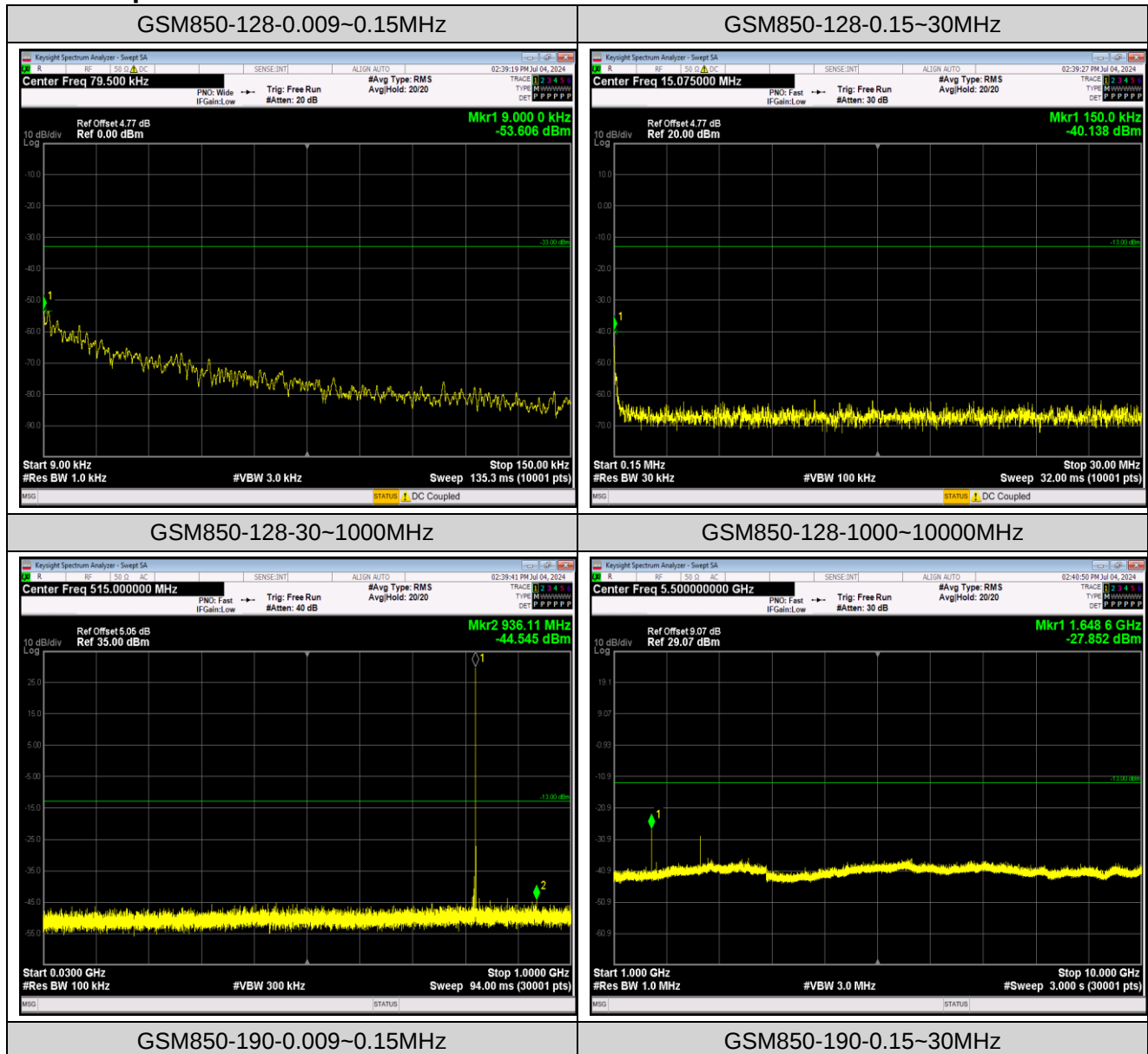
Appendix E: Conducted Spurious Emission

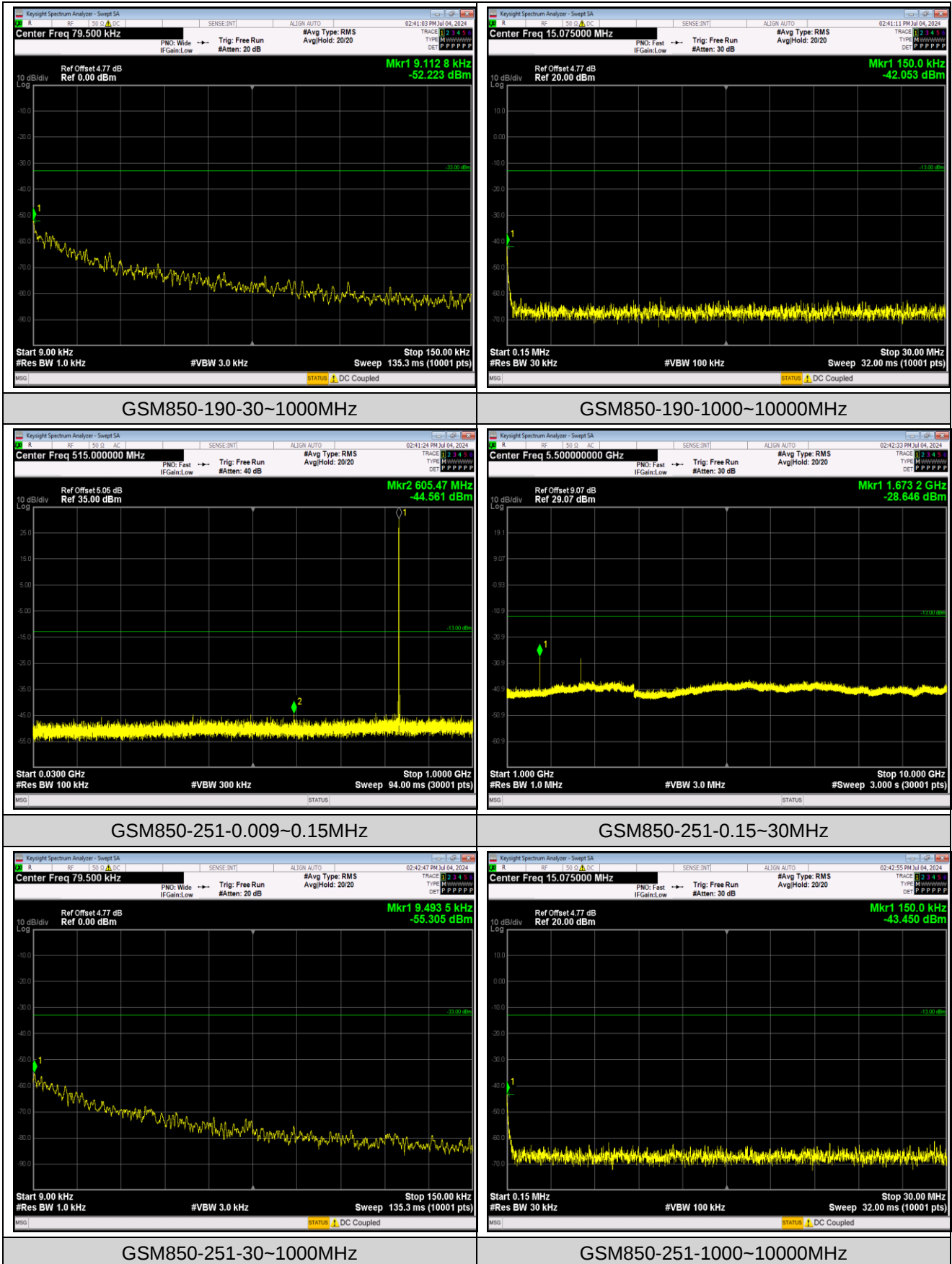
Test Result

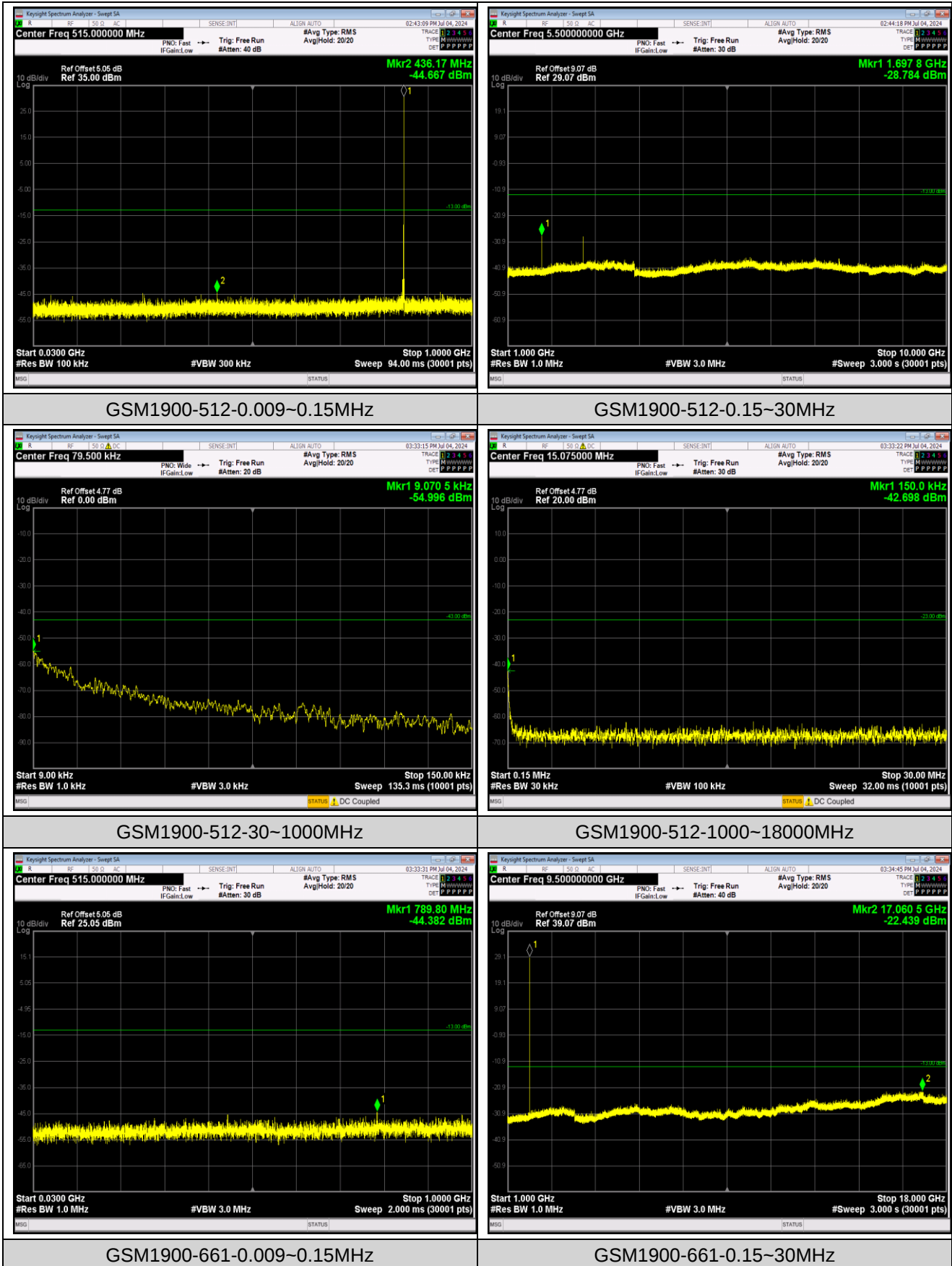
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-53.61	-33	PASS
GSM850	128	5	0.15~30MHz	0.15	-40.14	-13	PASS
GSM850	128	5	30~1000MHz	936.11	-44.55	-13	PASS
GSM850	128	5	1000~10000MHz	1648.6	-27.85	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-52.22	-33	PASS
GSM850	190	5	0.15~30MHz	0.15	-42.05	-13	PASS
GSM850	190	5	30~1000MHz	605.47	-44.56	-13	PASS
GSM850	190	5	1000~10000MHz	1673.2	-28.65	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-55.31	-33	PASS
GSM850	251	5	0.15~30MHz	0.15	-43.45	-13	PASS
GSM850	251	5	30~1000MHz	436.17	-44.67	-13	PASS
GSM850	251	5	1000~10000MHz	1697.8	-28.78	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-55	-43	PASS
GSM1900	512	0	0.15~30MHz	0.15	-42.7	-23	PASS
GSM1900	512	0	30~1000MHz	789.8	-44.38	-13	PASS
GSM1900	512	0	1000~18000MHz	17060.47	-22.44	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-56.4	-43	PASS
GSM1900	661	0	0.15~30MHz	0.16	-41.22	-23	PASS
GSM1900	661	0	30~1000MHz	964.05	-45.45	-13	PASS
GSM1900	661	0	1000~18000MHz	16915.4	-22.13	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-56.52	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-43.19	-23	PASS
GSM1900	810	0	30~1000MHz	891.49	-44.57	-13	PASS
GSM1900	810	0	1000~18000MHz	17010.03	-22.26	-13	PASS

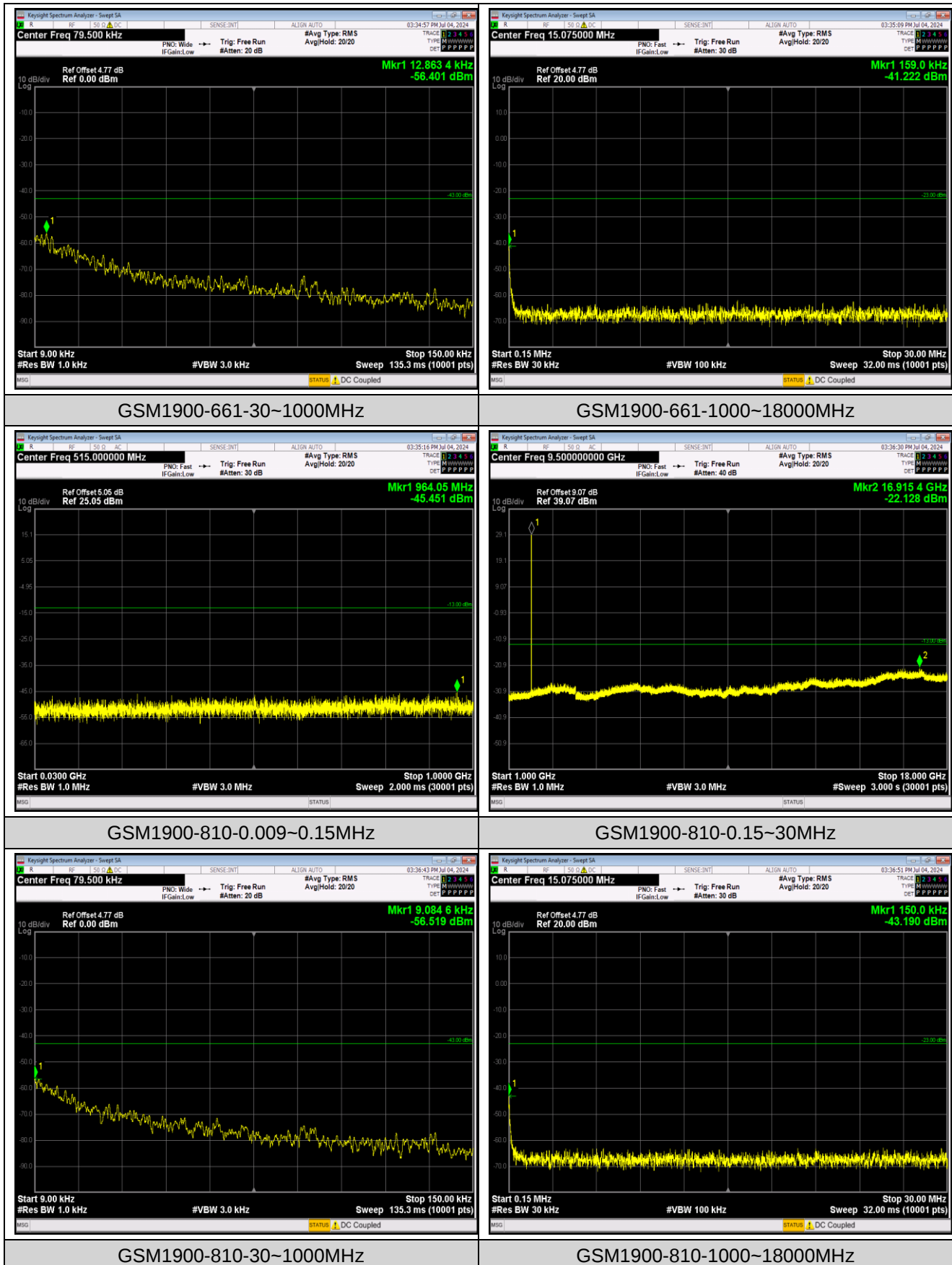
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

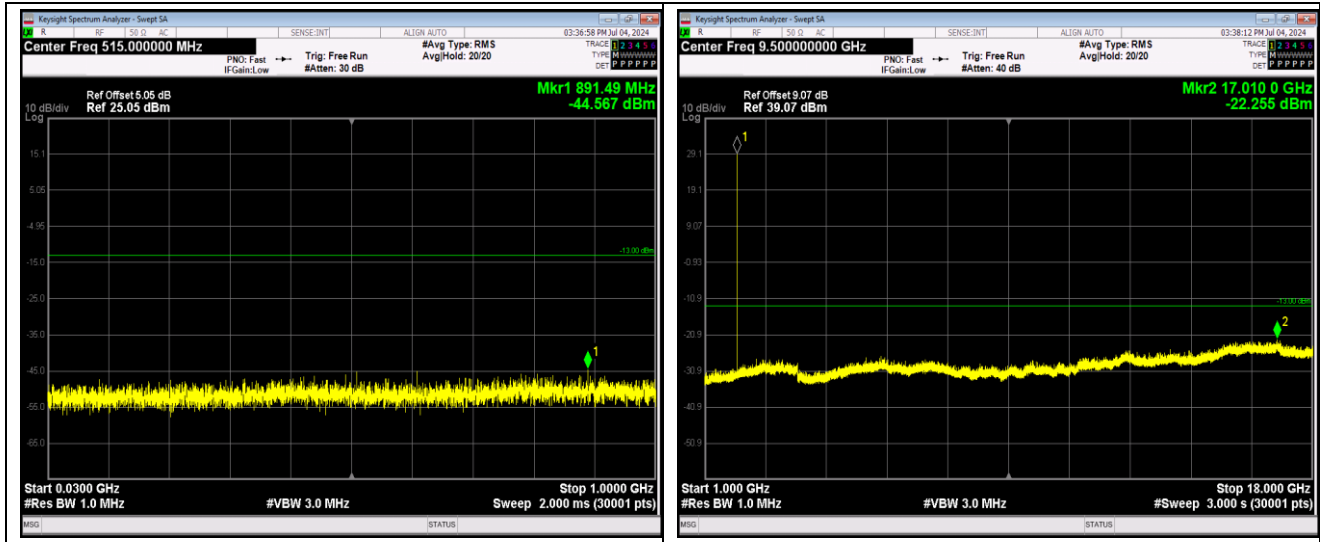
Test Graphs











Appendix F: Frequency Stability

Test Result

Reference Frequency: GSM850 Middle channel=190 Frequency=836.6MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.87	-30	1.39	0.001661	±2.5	Pass
	-20	-1.87	-0.002235		
	-10	-1.39	-0.001661		
	0	3.81	0.004554		
	10	-0.77	-0.000920		
	20	-0.39	-0.000466		
	30	2.32	0.002773		
	40	-0.90	-0.001076		
	50	1.13	0.001351		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-0.84	-0.001004	±2.5	Pass
	3.87	-5.88	-0.007028		
	4.45	0.74	0.000885		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Reference Frequency: EGPRS850 Middle channel=190 Frequency=836.6MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.87	-30	1.39	0.001661	±2.5	Pass
	-20	-0.68	-0.000813		
	-10	-0.06	-0.000072		
	0	0.48	0.000574		
	10	4.52	0.005403		
	20	5.10	0.006096		
	30	5.36	0.006407		
	40	4.55	0.005439		
	50	3.94	0.004710		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	3.91	0.004674	±2.5	Pass
	3.87	2.58	0.003084		
	4.45	3.97	0.004745		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Reference Frequency: PCS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.87	-30	8.17	0.004346	Within authorized band for PCS 1900	Pass
	-20	2.32	0.001234		
	-10	7.43	0.003952		
	0	10.59	0.005633		
	10	9.78	0.005202		
	20	12.46	0.006628		
	30	8.17	0.004346		
	40	17.43	0.009271		
	50	6.01	0.003197		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	4.29	0.002282	Within authorized band for PCS 1900	Pass
	3.87	17.40	0.009255		
	4.45	0.97	0.000516		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Reference Frequency: EGPRS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.75	-30	-3.20	-0.001702	Within authorized band for PCS 1900	Pass
	-20	-11.30	-0.006011		
	-10	-7.30	-0.003883		
	0	-0.90	-0.000479		
	10	-0.65	-0.000346		
	20	1.87	0.000995		
	30	-1.42	-0.000755		
	40	9.07	0.004824		
	50	8.33	0.004431		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-8.39	-0.004463	Within authorized band for PCS 1900	Pass
	3.87	-2.78	-0.001479		
	4.45	-4.42	-0.002351		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Appendix G: Modulation Characteristics

Test Result

Band	Channel	Result	Verdict
GSM850	190	PASS	PASS
EGPRS850	190	PASS	PASS
GSM1900	661	PASS	PASS
EGPRS1900	661	PASS	PASS

Remark: All channel had been tested, but only the worst case data displayed in this report.

Test Graphs

